ATTACHMENT J1

Little Rock AFB Electric Distribution System

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J1 Little Rock AFB Electric Distribution System

J1.1 Little Rock AFB Overview

Little Rock AFB is located in Pulaski County, which is near the geographic center of Arkansas. The Base is next to the City of Jacksonville and approximately 17 miles northeast of Little Rock, Arkansas, on Highway 67/167. The Base was established in the early 1950s in response to the Korean War. Its mission is to support the 314th Airlift Wing (AW), which has two primary missions:

- Serve as the AETC "school house" for the C-130 Hercules tactical airlift transport
- Provide airlift support for the United States and allied forces worldwide and at any time

The 314th AW and the 189th Air National Guard (ANG) Airlift Wing work together to train more than 2,300 aircrew students annually. The 463rd Airlift Group is the Base's major operational tenant and conducts global missions through their parent command – Air Mobility Command. Other tenants on Little Rock AFB include:

- Air Force Office of Special Investigations, Detachment 427
- Air Force Legal Services Agency
- Air Force Reserve Recruiting
- Air Mobility Warfare Center Combat Aerial Delivery School
- American Red Cross
- Area Defense Counsel
- Arkansas Air National Guard
- Army Air Force Exchange Service
- Defense Commissary Agency
- Defense Printing Service
- Defense Reutilization and Marketing Office
- Detachment 3, AMCAOS
- Detachment 4, 373rd TRS
- Detachment 30, Air Force ROTC
- Detachment 515, Air Force Audit Agency
- U.S. Army Corps of Engineers
- 96th Aerial Port Squadron
- 123rd Intelligence Squadron
- 362nd Training Squadron/OLA (AETC)
- 463rd Airlift Group

Little Rock AFB encompasses 6,104 acres, much of it being open space surrounding the airfield, industrial facilities, and recreation areas on Base. There are 1,667 facilities on Base, consisting of 1,245 buildings (859 military family housing buildings and 386 Base buildings) and occupying a total of 5.3 million square feet (the number of facilities and buildings could change based on new construction and demolition). The distribution of facility space is

approximately 32 percent industrial, 31 percent other (such as MWR, medical facilities, officer/enlisted clubs, VAQ/VOQ, and AAFES facilities), 30 percent administrative, and 7 percent residential (primarily military family housing [MFH]). The Base's single runway runs northeast to southwest and supports an annual flying program of more than 43,000 hours, including 30 to 35 daily missions, averaging 500 to 600 landings, takeoffs, and low-level passes.

The Base's mission has changed over the years to include hosting bomber wings as a component of the old Strategic Air Command and supporting the second generation Titan II intercontinental ballistic missile. The Base's most recent change was the realignment into AETC.

Projected future mission requirements and a steady increase in the Base population have necessitated the construction of new facilities and the renovation or demolition of older facilities. Land use management is a dominant issue in Little Rock AFB's plans for future development. Key objectives include:

- Maximizing land use near the aircraft parking apron for operation and maintenance facilities, including the construction of a new control tower and Base operations complex
- Enhancing the quality of life of Base personnel by updating and modernizing facilities
- Demolishing older facilities that are unsafe, energy inefficient, and have outlived their useful life

Key projects (On-going and Potential Facility Construction Projects List in the bidders' library) planned over the next five to seven years for Little Rock AFB will increase the total square footage of buildings on base by about 413,000 square feet (a 7 percent increase), and increase the total number of buildings by 3 (less than 1 percent increase). Little Rock is also considering developing up to 30-acres for additional family housing on Base.

The Base population exceeds 12,000, including military personnel, civilian employees, and dependents. The estimated annual financial impact of Little Rock AFB's annual payroll is approximately $345 million (combined military and civilian), and the Base contributes significantly to the local economy through civilian employment, contracting, and purchases from local businesses.

J1.2 Electric Distribution System Description

J1.2.1 Electric Distribution System Fixed Equipment Inventory

The Little Rock AFB electric distribution system consists of all appurtenances physically connected to the distribution system from the point in which the distribution system enters the Installation and Government ownership currently starts to the point of demarcation, defined by the Right of Way. The system may include, but is not limited to, transformers, circuits, protective devices, utility poles, ductbanks, switches, street lighting fixtures, and other ancillary fixed equipment. Lighting on poles includes the footings, pole, fixtures, sensors, and electrical cable. The actual inventory of items sold will be in the bill of sale at the time the system is transferred. The following description and inventory is included to provide the Contractor with a general understanding of the size and configuration of the

distribution system. The Government makes no representation that the inventory is accurate. The Contractor shall base its proposal on site inspections, information in the technical library, other pertinent information, and to a lesser degree the following description and inventory. Under no circumstances shall the Contractor be entitled to any service charge adjustments based on the accuracy of the following description and inventory.

Specifically excluded from the electric distribution system privatization are:

- Energy Management Control System (EMCS) equipment located on electric distribution system equipment and utility power poles
- Security lighting where the fixture is attached to a building
- Parking lot and security lights that are fed directly from buildings
- Airfield lighting, lighting vaults and all associated equipment
- Ramp lighting along aircraft parking apron
- Airfield beacon lights
- Ballfield lighting
- Track and walking path lighting
- Tennis court lighting
- Obstruction lighting on tall structures
- Grounding systems
- Cathodic protection systems
- Traffic signal systems
- Emergency generators
- Utility service system components owned by Entergy servicing Pulaski County Special School District facilities. The service includes approximately 700 linear feet of three-phased circuit, four poles, and three pole-mounted transformers. The service begins where it taps off Feeder D on the south side of Arnold Drive between 6th Street and Chief Master Sergeant Williams Drive and runs approximately 700 feet north to the service drop next to the school.

J1.2.1.1 Description

Entergy supplies power to Little Rock AFB from their substation located just across Marshall Road from the main entrance into the government-owned switching station located to the west of Marshall Road. The government-owned switching station contains the lattice cable support structures, connecting conductors, two capacitor banks, and six oil circuit reclosers. Four reclosers serve the four 13.8-kV main circuits on Base, the other two are used as spare reclosers (one is installed and one is uninstalled).

In the main area of the base, there is approximately 28,492 linear feet (lf) of overhead circuits and approximately 38,512 lf of underground circuits (in conduit). The Base is nearing the end of a program that will convert overhead circuits to underground circuits in the housing areas. This conversion will be completed prior to award of the utilities privatization contract. Once completed, there will be approximately 162,000 linear feet of underground circuits in housing, bring the total linear footage of underground circuits on base to 200,312 linear feet, or approximately 87.5 percent of the total linear footage of electric circuits. Overall, housing will represent approximately 71 percent of the electric distribution circuits.

The electric distribution system includes three-phase and single-phase transformers, utility poles, lighting towers with fixtures, line reclosers, switches, utility vaults, and capacitor banks. The average burial depth for underground primary distribution circuits is 3 feet below ground surface; secondary circuits are 2 feet below ground surface. These burial depths were estimated and there may be areas of the Base with deeper burial depths. The prevailing subsurface at Little Rock AFB is rock and/or slate. Overall, approximately 5 percent of the buried infrastructure is underneath paved surfaces.

Little Rock Air Force Base currently monitors the power factor at the switching station. In FY2002, the Base maintained a power factor between 98.0 and 100 percent. The Base's goal is to maintain a power factor greater than or equal to 99 percent. Currently, the Base uses capacitor banks to help maintain the power factor.

There is no supervisory control and data acquisition (SCADA) system for remote operation of the oil circuit reclosers; however, the voltage and current on each feeder leaving the main station may be monitored through the Trane energy management and control system (EMCS) on Base. A list of buildings on Base connected to the EMCS is included in the bidders' library.

Construction dates for the underground and overhead circuits and other system components range from the mid-1950s to present. The switching station was originally constructed in the 1950s; however, two of the station's oil circuit reclosers were recently replaced and the other three have been reconstructed. Eighty utility poles were replaced in 1997 following a base-wide pole inspection program. The remaining poles were found to be in good condition.

The conversion from overhead to underground in the housing areas was initiated to minimize tree trimming and problems associated with rear lot servitudes in residential areas. A three-phase circuit feeds these areas. This circuit splits to serve the housing with single-phase underground circuits.

Housing privatization is scheduled to occur at Little Rock AFB in 2004. Once the overhead to underground projects are completed, approximately 71 percent of the system, based on linear footage of circuit, will be in housing areas. The remaining 29 percent of the system will support the remainder of the Base.

J1.2.1.2 Inventory

Table 1 provides a general listing of the major electric distribution system fixed assets for the Little Rock AFB electric distribution system included in the sale.

TABLE 1
Fixed Inventory
Electric Distribution System Little Rock AFB

Component	Size	Quantity	Unit	Approximate Year of Construction
MAIN BASE				
Substations				
Recloser, vacuum circuit, 3ph	800 amp	2	EA	1998
Recloser, VSA-16, 3ph	800 amp	2	EA	1992
Recloser, ESM, 3 ph	560 amp	2	EA	1978
Recloser, 1 ph		13	EA	1995
Breaker Bays, 4 ea	15' X 15'	900	SF	1985
3-phase Gang operated Switches	800 amp	6	EA	1985
1-phase switches	400 amp	18	EA	1985
1-phase switches	800 amp	12	EA	1985
1-phase switches	1200 amp	6	EA	1985
Potential Transformers	400 volt	2	EA	1985
Potential Transformers	600 volt	9	EA	1985
Potential Transformers	800 volt	3	EA	1985
Potential Transformers	8400 volt	3	EA	1985
Lightning Arrestors	Station	15	EA	1985
Current Transformers	2000 amp	30	MVA	1985
Capacitor Banks	2000 kVAR	2	MVAR	1985
Fused Cutouts		9	EA	1985
Stn. Service Transfmr, pole mnt.	37.5 kVA	1	EA	1985
Fence, chain link	60' X 80'	4,800	LF	1985
Grounding Grid, #4 Cu	70' X 90'	1,460	LF	1985
Crushed Gravel Paving	70' X 90' x 6 in.	200	CY	1985
Station Lighting	150 W, HPS	4	EA	1985
Terminators	1000 kcmil	36	EA	1985
Underground Circuits				
3ph, 3w, in conduit, SCLF	#2	47,250	SCLF	2001
3ph, 3w, in conduit, SCLF	#2	13,560	SCLF	1990

TABLE 1
Fixed Inventory
Electric Distribution System Little Rock AFB

Component	Size	Quantity	Unit	Approximate Year of Construction
3ph, 3w, in conduit, SCLF	#2	21,000	SCLF	1985
3ph, 3w, in conduit, SCLF	#2/0	7,200	SCLF	1990
3ph, 3w, in conduit, SCLF	#1/0	2,700	SCLF	2001
3ph, 3w, in conduit, SCLF	#1/0	1,950	SCLF	1985
1ph, 1w, in conduit	#1	27,800	SCLF	1990
Ductbank	2x2	7,650	LF	1985
Ductbank	2x2	6,920	LF	1990
Ductbank	2x2	16,650	LF	2001
Ductbank	1x2	27,800	LF	1990
Overhead Circuits				
3 ph, 3 w, conductor, SCLF	#4/0 ACSR	15,090	SCLF	1985
3 ph, 3 w, conductor, SCLF	#4 ACSR	6,600	SCLF	1975
3 ph, 3 w, conductor, SCLF	#2 ACSR	6,360	SCLF	1975
3 ph, 3 w, conductor, SCLF	#556 ACSR	18,900	SCLF	1975
3 ph, 3 w, conductor, SCLF	#6 CU	840	SCLF	1955
3 ph, 3 w, conductor, SCLF	#4 CU	1,200	SCLF	1955
3 ph, 3 w, conductor, SCLF	#2 CU	14,493	SCLF	1955
3 ph, 3 w, conductor, SCLF	#6 ACSR	5,640	SCLF	1955
3 ph, 3 w, conductor, SCLF	#4 ACSR	59,850	SCLF	1955
3 ph, 3 w, conductor, SCLF	#2 ACSR	90,159	SCLF	1955
3 ph, 3 w, conductor, SCLF	#1/0 ACSR	3,960	SCLF	1955
3 ph, 3 w, conductor, SCLF	#336 ACSR	114,015	SCLF	1955
3 ph, 3 w, conductor, SCLF	#556 ACSR	4,800	SCLF	1955
Transformers (kVA) 3 Phase, Pad Mount				

TABLE 1
Fixed Inventory
Electric Distribution System Little Rock AFB

Component	Size	Quantity	Unit	Approximate Year of Construction
1-phase, Pole Type on Ground	37.5 kVA	3	EA	1954
1-phase, Pole Type on Ground	37.5 kVA	3	EA	1956
1-phase, Pole Type on Ground	50 kVA	3	EA	1964
1-phase, Pole Type on Ground	75 kVA	3	EA	1964
1-phase, Pole Type on Ground	100 kVA	3	EA	1956
1-phase, Pole Type on Ground	100 kVA	3	EA	1960
1-phase, Pole Type on Ground	167 kVA	3	EA	1954
1-phase, Pole Type on Ground	167 kVA	3	EA	1956
1-phase, Pole Type on Ground	167 kVA	3	EA	1958
1-phase, Pole Type on Ground	500 kVA	6	EA	1960
3-phase, Pad Mount	45 kVA	1	EA	1994
3-phase, Pad Mount	75 kVA	1	EA	1957
3-phase, Pad Mount	75 kVA	1	EA	1968
3-phase, Pad Mount	75 kVA	1	EA	1981
3-phase, Pad Mount	75 kVA	1	EA	1984
3-phase, Pad Mount	75 kVA	1	EA	1994
3-phase, Pad Mount	75 kVA	1	EA	2000
3-phase, Pad Mount	112.5 kVA	3	EA	1985
3-phase, Pad Mount	112.5 kVA	1	EA	1986
3-phase, Pad Mount	112.5 kVA	1	EA	1988
3-phase, Pad Mount	112.5 kVA	1	EA	1995
3-phase, Pad Mount	150 kVA	2	EA	1956
3-phase, Pad Mount	150 kVA	1	EA	1957
3-phase, Pad Mount	150 kVA	1	EA	1958
3-phase, Pad Mount	150 kVA	1	EA	1960
3-phase, Pad Mount	150 kVA	1	EA	1978
3-phase, Pad Mount	150 kVA	5	EA	1980
3-phase, Pad Mount	150 kVA	3	EA	1984
3-phase, Pad Mount	150 kVA	1	EA	1985

TABLE 1
Fixed Inventory
Electric Distribution System Little Rock AFB

Component	Size	Quantity	Unit	Approximate Year of Construction
3-phase, Pad Mount	150 kVA	1	EA	1989
3-phase, Pad Mount	150 kVA	1	EA	1992
3-phase, Pad Mount	150 kVA	4	EA	1995
3-phase, Pad Mount	150 kVA	2	EA	1996
3-phase, Pad Mount	150 kVA	1	EA	1997
3-phase, Pad Mount	225 kVA	6	EA	1955
3-phase, Pad Mount	225 kVA	1	EA	1956
3-phase, Pad Mount	225 kVA	1	EA	1975
3-phase, Pad Mount	225 kVA	2	EA	1984
3-phase, Pad Mount	225 kVA	1	EA	1985
3-phase, Pad Mount	225 kVA	1	EA	1986
3-phase, Pad Mount	225 kVA	2	EA	1990
3-phase, Pad Mount	225 kVA	1	EA	1993
3-phase, Pad Mount	225 kVA	2	EA	1994
3-phase, Pad Mount	225 kVA	5	EA	1995
3-phase, Pad Mount	225 kVA	2	EA	1996
3-phase, Pad Mount	225 kVA	1	EA	1998
3-phase, Pad Mount	225 kVA	1	EA	1999
3-phase, Pad Mount	225 kVA	1	EA	2001
3-phase, Pad Mount	225 kVA	2	EA	2002
3-phase, Pad Mount	300 kVA	6	EA	1955
3-phase, Pad Mount	300 kVA	1	EA	1956
3-phase, Pad Mount	300 kVA	1	EA	1975
3-phase, Pad Mount	300 kVA	1	EA	1978
3-phase, Pad Mount	300 kVA	3	EA	1980
3-phase, Pad Mount	300 kVA	2	EA	1981
3-phase, Pad Mount	300 kVA	1	EA	1983
3-phase, Pad Mount	300 kVA	1	EA	1985
3-phase, Pad Mount	300 kVA	1	EA	1988
3-phase, Pad Mount	300 kVA	1	EA	1989

TABLE 1
Fixed Inventory
Electric Distribution System Little Rock AFB

Component	Size	Quantity	Unit	Approximate Year of Construction
3-phase, Pad Mount	300 kVA	1	EA	1990
3-phase, Pad Mount	300 kVA	2	EA	1992
3-phase, Pad Mount	300 kVA	1	EA	1994
3-phase, Pad Mount	300 kVA	5	EA	1995
3-phase, Pad Mount	300 kVA	1	EA	1998
3-phase, Pad Mount	300 kVA	2	EA	1999
3-phase, Pad Mount	500 kVA	1	EA	1975
3-phase, Pad Mount	500 kVA	1	EA	1983
3-phase, Pad Mount	500 kVA	1	EA	1984
3-phase, Pad Mount	500 kVA	1	EA	1985
3-phase, Pad Mount	500 kVA	3	EA	1988
3-phase, Pad Mount	500 kVA	1	EA	1991
3-phase, Pad Mount	500 kVA	3	EA	1995
3-phase, Pad Mount	500 kVA	2	EA	1996
3-phase, Pad Mount	500 kVA	4	EA	1997
3-phase, Pad Mount	500 kVA	1	EA	1998
3-phase, Pad Mount	500 kVA	2	EA	2002
3-phase, Pad Mount	750 kVA	1	EA	1981
3-phase, Pad Mount	750 kVA	1	EA	1993
3-phase, Pad Mount	750 kVA	1	EA	1996
3-phase, Pad Mount	1000 kVA	1	EA	1962
3-phase, Pad Mount	1000 kVA	1	EA	1975
3-phase, Pad Mount	1000 kVA	1	EA	1979
3-phase, Pad Mount	1000 kVA	1	EA	1998
3-phase, Pad Mount	1500 kVA	1	EA	1972
3-phase, Pad Mount	2000 kVA	1	EA	1975
Pad, concrete, 25 sf, est. 1 per transferormer	6-in.	158	EA	1980
Grounding Rods, est. 1 per transformer	#2/0 CU, 8-ft	158	EA	1980
Cable Terminators, est. at 1 per phase at riser		816	EA	1980

TABLE 1
Fixed Inventory
Electric Distribution System Little Rock AFB

Component	Size	Quantity	Unit	Approximate Year of Construction
Cable Terminators, est. at 1 per phase at transformer		816	EA	1980
Transformers (kVA) 1 Phase, Pole Mount				
1-Phase	25 kVA	12	EA	1995
1-Phase	37.5 kVA	9	EA	1995
1-Phase	50 kVA	6	EA	1995
1-Phase	75 kVA	6	EA	1995
1-Phase	100 kVA	3	EA	1995
1-Phase	250 kVA	3	EA	1995
1-Phase	25 kVA	3	EA	1985
1-Phase	50 kVA	21	EA	1985
1-Phase	75 kVA	6	EA	1985
1-Phase	37.5 kVA	30	EA	1975
1-Phase	100 kVA	3	EA	1975
1-Phase	10 kVA	3	EA	1955
1-Phase	15 kVA	3	EA	1955
1-Phase	25 kVA	39	EA	1955
1-Phase	37.5 kVA	12	EA	1955
1-Phase	50 kVA	30	EA	1955
1-Phase	75 kVA	12	EA	1955
1-Phase	100 kVA	3	EA	1955
Utility Poles (ft)	Total			
Wood Pole	45-ft	159	EA	1995
Crossarms	6-ft	199	EA	1995
Wood Pole	45-ft	296	EA	1985
Crossarms	6-ft	369	EA	1985
Wood Pole	45-ft	213	EA	1955
Crossarms	6-ft	452	EA	1955
Metal Pole	80-ft	21	EA	1995

TABLE 1
Fixed Inventory
Electric Distribution System Little Rock AFB

Component	Size	Quantity	Unit	Approximate Year of Construction
Down Guy Wires (estimated at 1/10 poles)		690	EA	1955
Light Fixtures	150 Watt, HPS	665	EA	1990
Reclosers, Pole Mounted		10	EA	1985
Switches, Pad Mount				
2-Way	600 amp	11	EA	1995
3-Way	600 amp	1	EA	1985
4-Way	600 amp	1	EA	2001
Pad, Concrete, 25 sf ea	6-in.	13	EA	1995
Switches, Pole Mount				
Knifeblade		3	EA	1955
GOAB		13	EA	1985
In Line Fuse Cutouts		22	EA	1985
Line Tension Disconnect		1	EA	1955
Utility Vaults	5 'x 10' x 6'	16	EA	1995
Splices, est. at 6 per vault		96	EA	1995
Lightning arrestors	13 to 26 kV	176	EA	1980
Capacitors	600 kVAR	24	EA	1985
Capacitors	900 kVAR	12	EA	1985
Meters		153	EA	1985

TABLE 1
Fixed Inventory
Electric Distribution System Little Rock AFB

Component	Size	Quantity	Unit	Approximate Year of Construction
BASE HOUSING				
Underground Circuit				
Primary				
3ph, 3w, in conduit, SCLF	#2/0 CU	23,400	SCLF	1996
Ductbank	2x2	7,800	LF	1996
3ph, 3w, in conduit, SCLF	#2/0 CU	31,200	SCLF	1998
Ductbank	2x2	10,400	LF	1998
3ph, 3w, in conduit, SCLF	#2/0 CU	28,800	SCLF	1999
Ductbank	2x2	9,600	LF	1999
3ph, 3w, in conduit, SCLF	#2/0 CU	51,900	SCLF	2000
Ductbank	2x2	17,300	LF	2000
3ph, 3w, in conduit, SCLF	#2/0 CU	70,500	SCLF	2003
Ductbank	2x2	23,500	LF	2003
Secondary				
1ph, 2w, in conduit, SCLF	#2 CU	21,200	SCLF	1996
Ductbank	1x2	10,600	LF	1996
1ph, 2w, in conduit, SCLF	#2 CU	28,200	SCLF	1998
Ductbank	1x2	14,100	LF	1998
1ph, 2w, in conduit, SCLF	#2 CU	26,000	SCLF	1999
Ductbank	1x2	13,000	LF	1999
1ph, 2w, in conduit, SCLF	#2 CU	47,000	SCLF	2000
Ductbank	1x2	23,500	LF	2000
1ph, 2w, in conduit, SCLF	#2 CU	64,000	SCLF	2003
Ductbank	1x2	32,000	LF	2003
Transformers				
1-Phase, Pad Mount	50-100 KVA	23	EA	1996
1-Phase, Pad Mount	50-100 KVA	38	EA	1998
1-Phase, Pad Mount	50-100 KVA	37	EA	1999

TABLE 1
Fixed Inventory
Electric Distribution System Little Rock AFB

Component	Size	Quantity	Unit	Approximate Year of Construction
1-Phase, Pad Mount	50-100 KVA	50	EA	2000
1-Phase, Pad Mount	50-100 KVA	35	EA	2003
Pad, concrete, 25 sf, est. 1 per transferormer	6-in.	183	EA	1999
Grounding Rods, est. 1 per transformer	#2/0 CU, 8-ft	183	EA	1999
Cable Terminators, est. at 1 per phase at riser		183	EA	1999
Cable Terminators, est. at 1 per phase at transformer		183	EA	1999
Switches, Pad Mount				
4-way	600 amp	1	EA	1996
4-way	600 amp	1	EA	2003
Pad, concrete, 25 sf, est. 1 per transferormer	6-in.	2	EA	1999
Junction Box				
Steel Cabinet above Ground	4' x 3'	10	EA	1996
Steel Cabinet above Ground	4' x 3'	5	EA	1998
Steel Cabinet above Ground	4' x 3'	5	EA	1999
Steel Cabinet above Ground	4' x 3'	10	EA	2000
Steel Cabinet above Ground	4' x 3'	10	EA	2003

AWG = American Wire Gauge
cy = cubic yard
EA = each
est. = estimated
GOAB = gang operated air break
HPS = high pressure sodium
in. = inch
kVA = kilovolt ampere
kVAR = kilovolt ampere reactive
sclf = single conductor linear foot
sf = square foot
V = volt

J1.2.2 Electric Distribution System Non-Fixed Equipment and Specialized Tools

Table 2 lists other ancillary equipment (spare parts) and **Table 3** lists specialized vehicles and tools included in the purchase. Offerors shall field verify all equipment, vehicles, and tools prior to submitting a bid. Offerors shall make their own determination of the adequacy of all equipment, vehicles, and tools.

TABLE 2
Spare Parts
Electric Distribution System Little Rock AFB

Qty	Item	Make/Model	Description	Remarks
	Pad Mount Transformers			
1	1500 KVA 240/480		Ser # pj23960101	Mfg. Date 12-17-92, Total Weight 11048 pounds
1	2000 kVA 120/208	Jimelco, Inc.	Ser # pj23970101	Mfg. Date 12-18-92, Total Weight 14050 pounds

TABLE 3
Specialized Vehicles and Tools
Electric Distribution System Little Rock AFB

Qty	Item	Make/Model	Description	Remarks
There are no specialized vehicles and tools included with the system to be privatized				

J1.2.3 Electric Distribution System Manuals, Drawings, and Records

Table 4 lists the manuals, drawings, and records that will be transferred with the system.

TABLE 4
Manuals, Drawings, and Records
Electric Distribution System Little Rock AFB

Qty	Item	Description	Remarks
1	CD	Map No. G-6, Electrical Distribution System, Base Comprehensive Plan, Little Rock AFB, Arkansas	2003
1	CD	Map No. G-9, Cathodic Protection, Base Comprehensive Plan, Little Rock AFB, Arkansas	2003
1	Report	Little Rock Air Force Base Electrical Distribution System Master Planning Study - Phase 1 – Field Walkdown Results, February 2003.	Feb 2003
1	Manual	ABB Power T&D Company, IB38-740 ISSUE B, PCD2000 Control Device, Operation Instructions	1998
1	Manual	Cooper Power Systems, 280-75 (electrical apparatus), Type ME Electronic Recloser Control and Accessories	Jan 1990
1	Manual	Cooper Power Systems, S280-75-1 (service information), Type ME Electronic Control	Jan 1990

TABLE 4
Manuals, Drawings, and Records
Electric Distribution System Little Rock AFB

Qty	Item	Description	Remarks
1	Manual	Cooper Power Systems S280-45-5	Jan 1990
1	Manual	Cooper Power Systems Reclosers 280-45 (electrical apparatus) types VSA and VSML; Three-Phase; Electronically controlled	
1	Manual	Cooper Power Systems Recloser, Single-phase Type H, 4H, Installation and Operations Instructions	June 1998
1	Manual	S&C Manual PMH Pad-mounted Gear 662-505, Outdoor Distribution (14.4 kv and 25 kv)	1988
1	Instructions	Base-specific procedures for operating the primary power distribution system	
1	List	Listing of supplementary information about the Base's lighting system	
1	List	Listing of transformers on Base, PCB sampling results, date of manufacture, building location, KW rating, manufacturer, and serial number	See Electrical G-Tab

J1.3 Specific Service Requirements

The service requirements for the Little Rock AFB electric distribution system are as defined in the Section C, *Description/Specifications/Work Statement*. The following requirements are specific to the Little Rock AFB electric distribution system and are in addition to those found in Section C. If there is a conflict between requirements described below and Section C, the requirements listed below take precedence over those found in Section C.

- IAW paragraph C.3.4 and J1.7, the Contractor shall coordinate with the Little Rock AFB Energy Manager so that the Contractor's service and systems support the Base's energy management program goal of achieving and maintaining a power factor of 99 percent for the Base. The Contractor shall operate and maintain the existing capacitor banks and install new capacitor banks for all future large motors. Unless otherwise agreed to by the Contractor and the Government, the Contractor shall use copper wire for all new and replacement cable.
- In addition to the requirements defined by paragraph C.11.2, *Capital Upgrades and Renewals and Replacements Plan*, the Contractor shall include a summary of activities associated with achieving and maintaining the Base's 99 percent power factor in the annual submittal of the Capital Upgrades and Renewals and Replacements Plan. The summary shall detail the activities performed in the prior year and the activities planned for each of the next 5 years. The activities to be reported include the operation, maintenance and repair, replacement of existing infrastructure, as well as the installation of new infrastructure.

- For all privatized lighting fixtures, operation and maintenance of lighting fixtures includes the purchase and replacement of the lighting element and the removal and disposal of the replaced lighting element.
- The Government reserves the right to remotely monitor secondary electric meters with the Base EMCS. The Government shall own, operate and maintain the equipment used to monitor meters.
- The Contractor shall install pulse generating capable electric meters compatible with the Base's EMCS for all new secondary electric meters. The Contractor shall coordinate with the Contracting Officer, or other representatives as designated by the Contracting Officer, to connect new meters to the existing EMCS (the Control Office is located in Building 543). The Contractor shall provide all labor, materials, and equipment necessary to connect the meters to the EMCS. The Contractor shall be responsible for any EMCS programming requirements associated with the meter's connection.
- The Arkansas Air National Guard (ANG) is "area metered." The following buildings are served through one meter located near building 208: 197, 198, 199, 201, 202, 204, 205, 206, 207, 208, 209, 211, 213, 215, and 217. All of these buildings belong to the ANG except 208, which is metered separately at the building and the usage subtracted from the area meter total. Any new service installed by the Contractor in this area, that is not part of the ANG, shall be separately metered at the building to preserve the ANG area meter arrangement.
- IAW paragraph C.5.1.3, *Contractor Facilities*, and in compliance with Base architectural standards, all new and renewal electric circuits shall be installed underground unless otherwise agreed to by the Contractor and the Government. Underground circuits will be installed using directional boring techniques to minimize surface disturbance during construction, unless otherwise agreed to by the Government and the Contractor. Excavation of paved surfaces is prohibited without consultation and approval from the Base Civil Engineer.
- The Contractor shall not use T-splices on the electrical distribution system, unless otherwise agreed to by the Contractor and the Government. The Contractor shall install switches with new pad-mount transformers at service taps for isolation and repair.
- The Contractor shall follow the Base digging permit process. The Contractor shall obtain all necessary authorizations, permits and line locates prior to performing any excavations on Base.
- The Contractor shall support the Base digging permit process by routinely accepting and promptly processing digging permit requests which may impact on the integrity of the Contractor's utility system and/or the safety of the requestors. The Contractor shall conform to the Base digging permit process or submit to the Contracting Officer for approval a methodology for accepting, processing, approving, and listing reason(s) for disapproving digging permits.
- The Contractor shall operate and maintain the Base switching station, including all electrical equipment within the station, and all other related structures including but not

limited to inside ground areas, transformer pads and protective fencing. Grounds and structures areas shall be maintained IAW the Right of Way.

- The Contractor is responsible for all supporting utilities that may be required to own, operate and maintain the utility system being privatized. For example, electricity may be needed to operate the components within the switching station, e.g., station lighting. Supporting utilities are defined as the supply of electricity, natural gas, water, or wastewater collection, and any infrastructure or materials necessary to connect to the supply of electricity, natural gas, water, or wastewater collection. The Contractor shall coordinate with the Base Civil Engineer and the Contracting Officer for any supporting utilities to be provided by the Government.
- The Contractor shall enter into a Memorandum of Understanding (MOU) with the Base Fire Department for fire protection of all facilities included in the purchase of the utility. The MOU shall be completed during the transition period and a copy provided to the Contracting Officer.
- The Contractor shall abide by Base fire protection requirements. The utility system purchased by the Contractor may include facilities. These facilities may or may not include fire alarm systems. Where required by federal, state or local regulation, the Contractor shall maintain the fire alarm system for all facilities owned and operated by the Contractor. The Contractor shall permit Fire Department personnel access to their facilities to perform fire inspections and emergency response.
- IAW Paragraph C.9.8, *Exercises and Crisis Situations Requiring Utility Support*, the Contractor shall provide support as directed by Base Civil Engineer Control Center for exercises and crisis situations. The Contractor shall ensure that employees understand, implement and enforce Force Protection Condition (FPCON) requirements. FPCON requirements are specified in Air Force Instruction 10-245, *Air Force Antiterrorism (ATI) Standards*. The Contractor is advised that Force Protection Conditions vary and that these changes may cause delays in access to the base.
- IAW paragraph C.8, Contractor shall respond (onsite) to emergency service requests within one hour for the facilities listed in the most current version (currently 07 April 2003) of ANNEX H to the *Base Civil Engineer Contingency Response Plan*. The Contractor's representative that responds shall be knowledgeable of the electric distribution system and the Contractor's Service Interruption/Contingency Plan. The representative shall be able to assess damages and estimate the time it will take to make temporary or full-service repairs.

J1.4 Current Service Arrangement

Little Rock AFB currently purchases electrical power from Entergy Arkansas, Inc. The Air Force, however, may enter into agreements in the future to purchase power from other wholesalers. The current contract between Little Rock AFB and Entergy utilizes a tariff rate approved by the APSC. While the Base is essentially free to contract with a different supplier, the rate may be regulated by the APSC.

Annual electric power consumption at Little Rock AFB is approximately 94.3 million kilowatt-hours (kWh). The peak demand for FY2001 was approximately 18.2 megawatts (MW), occurring in the months of July and August. The monthly lows occurred in November (3,802 MWh), April (4,075 MWh) and March (4,191 MWh). Historical peak demand for electric power occurred in the winter of 1997 when electric consumption reached 19.337 MW.

J1.5 Secondary Metering

J1.5.1 Existing Secondary Meters

Table 5 provides a listing of the existing (at the time of contract award) secondary meters that will be transferred to the Contractor. The Contractor shall provide meter readings once a month for all secondary meters IAW Paragraph C.3 and J1.6 below.

TABLE 5
Existing Secondary Meters
Electric Distribution System Little Rock AFB

Acct	Meter	Building	Street	Code3
0798D	51175	798	School (798)	D
1090D	51560	1090	Medical Facility (1090)	D
CFeederD	51820	9999CD	C Feeder Demand	D
DFeederD	51830	9999DD	D Feeder Demand	D
0101E	50000	101	ANG (101) CE & Med	E
0102E	50020	102	ANG (102)	E
0106E	50035	106	ANG (106)	E
0110E	50050	110	Fire Station (110)	E
0112E	50060	112	ANG (112)	E
0118E	50085	118	ANG (118)	E
0120E	50105	120	Base Ops (120)	E
0122E	50115	122	ANG (122)	E
0124E	50130	124	ANG (124) Hazmat	E
0126E	50140	126	ANG (126)	E
0133E	50160	133	ANG (133)	E
0137E	50175	137	ANG (137)	E
0139E	50190	139	ANG (139) Sec Forces	E
0173E	50210	173	EOD (173)	E
0200E	50220	200	ANG (200) Area Ele	E
0208E	50250	208	Building 208	E

TABLE 5
Existing Secondary Meters
Electric Distribution System Little Rock AFB

Acct	Meter	Building	Street	Code3
0210E	50265	210	FTD (210)	E
0216E	50290	216	50th AS (216)	E
0222-1E	50300	222-1	Fuel Cell Hangar North	E
0222-2E	50310	222-2	Fuel Cell Hangar South	E
0224E	50320	224	Nose Dock (224)	E
0228E	50335	228	Wash Rack (228)	E
0232E	50350	232	CADS (232)	E
0234-1E	50365	234	62 AS (234)	E
0234E	50360	234	62 AS (234)	E
0236E	50370	236	62 AS Ops (236)	E
0237E	50380	237	Food Service (237)	E
0242-1E	50390	242-1	Air Freight (242-1)	E
0242-2E	50405	242-2	Air Freight (242-2)	E
0245E	50410	245	Building 245	E
0246E	50420	246	Building 246	E
0250E	50430	250	Jumbo Hangar (250)	E
0253E	50445	253	Load Master (253)	E
0255E	50455	255	Hose Dock (255)	E
0256-1E	50470	256-1	Engine Shop (256)	E
0256-2E	50480	256-2	Engine Shop (256)	E
0257E	50485	257	Building 257	E
0259E	50495	259	Aerial Delivery (259)	E
0260E	50505	260	Fabrication shop (260)	E
0261E	50515	261	Veh Maint (261)	E
0262E	50525	262	Building 262	E
0263E	50535	263	Veh Maint (263)	E
0264E	50545	264	50 AS (264)	E
0272E	50560	272	Building 272	E
0280E	50570	280	Building 280	E
0282E	50580	282	314 LG/AC Maint (282)	E
0284E	50595	284	Maint Dock (284)	E

TABLE 5
Existing Secondary Meters
Electric Distribution System Little Rock AFB

Acct	Meter	Building	Street	Code3
0286E	50605	286	Building 286	E
0288E	50615	288	314 LGS (288)	E
0290E	50640	290	Building 290	E
0294E	50630	294	53rd AS (294)	E
0308E	50655	308	ANG (308) HQ	E
0310E	50675	310A	Building 310	E
0314E	50695	314	Building 314	E
0320E	50705	320	Building 320	E
0340E	50715	340	Parachute Shop (340)	E
0344-1E	50735	344	314 LG (344)	E
0344E	50725	344	314 LG (344)	E
0350E	50745	350	Gas AC Shop (350)	E
0356E	50760	356	Jet Eng Shop (356)	E
0362E	50775	362	Avionics Shop (362)	E
0368E	50785	368	Building 368	E
0391E	50800	391	Engine Test site (391)	E
0432E	50810	432	Building 432	E
0460E	50815	460	Building 460	E
0553E	50845	553	Wash Rack (553)	E
0620E	50855	620	Recruiting (620)	E
0640-1E	50865	640	Coleman Dairy (640)	E
0640-2E	50870	640	Coleman Dairy (640)	E
0648E	50875	648	Vet Clinic (648)	E
0660E	50885	660	Car Wash (660)	E
0710E	CONT	710	Dorm (710)	E
0714E	50910	714	Dorm (714)	E
0718E	50920	718	Dorm (718)	E
0724E	50930	724	Dorm (724)	E
0725E	50945	725	Dorm (725)	E
0726E	50960	726	Dorm (726)	E
0727E	50975	727	Dorm (727)	E

TABLE 5
Existing Secondary Meters
Electric Distribution System Little Rock AFB

Acct	Meter	Building	Street	Code3
0728E	50990	728	Dorm (728)	E
0729E	51005	729	Dorm (729)	E
0730E	51020	730	Dorm (730)	E
0731E	51035	731	Dorm (731)	E
0732E	51050	732	Dorm (732)	E
0735E	51065	735	Dorm (735)	E
0744E	51080	744	Dorm (744)	E
0748E	51090	748	Dorm (748)	E
0756E	51100	756	Bio (dorm area) (756)	E
0764E	51110	764	Office (dorm area) (764)	E
0768E	51115	768	Dorm (768)	E
0772E	51125	772	Dorm (772)	E
0786E	51135	786	MWR Concession Stand	E
0789E	51140	789	Burger King (789)	E
0790E	30934798	790	Commissary (790)	E
0798E	51170	798	School (798)	E
0840E	51205	840	Base Ed Center (840)	E
0846E	51215	846	Dorm (846)	E
0854E	51220	854	Dorm (854)	E
0860E	51230	860	Dorm (860)	E
0880E	83103490	880	Dorm (880)	E
0882E	51255	882	Dorm (882)	E
0884E	51260	884	Dorm (884)	E
0940E	51265	940	BX (940)	E
0947E	51280	947	ATM (947)	E
0956E	51285	956	Bowling (956)	E
0959E	51300	959	AAFES Manager (959)	E
0960AE	51315	960	Garden Center (960)	E
0960BE	51330	960-2	Garden Center (960)	E
0966E	51340	966	Post Office (966)	E
0970E	51355	970	Bank (970)	E

TABLE 5
Existing Secondary Meters
Electric Distribution System Little Rock AFB

Acct	Meter	Building	Street	Code3
0980E	51375	980	Theater (980)	E
0990E	51415	990	Tire Shop (990)	E
1030AE	51430	1030	Airlifter Club (1030)	E
1030POI	51433	1030	Airlifter Club (1030)	E
1035E	51465	1035	New Shoppette	E
1075E	51480	1075	Golf club house	E
1078E	51495	1078	Golf Shed	E
1080E	51500	1080	JR Rockers (1080)	E
1090E	51545	1090	Medical Facility (1090)	E
1096E	4384791	1096	GTE (1096)	E
1099E	51580	1099	Cable (1099)	E
1230A2E	1230A-2	1230A-2	Flight Simulator (1230A-2)	E
1230AE	6739087	1230A-1	Flight Simulator (1230A-1)	E
1230B1E	6529236	1230B-1	Flight Simulator (1230B-1)	E
1230B2E	82751.48	1230B-2	Flight Simulator (1230B-2)	E
1230B3	6529781	1230B-3	Flight Simulator (1230B-3)	E
1255E	51630	1255	Personnel Center (1255)	E
1377E	51640	1377	Combat Trng Area (1377)	E
1378E	51650	1378	Sewer Lift Station (1378)	E
1397E	42349690	1397	Training area (1397)	E
1398E	76712319	1398	Training area (1398)	E
1421E	81386396	1421	Training area (1421)	E
1422E	51680	1422	Training area wash rack	E
1427E	51685	1427	Troop Camp (1427)	E
1555E	51690	1555	BX Work Shop (1555)	E
1568E	51695	1568	Recycling (1568)	E
1988E	51700	1988	Child Care (1988)	E
1990E	51705	1990	Child Care (1990)	E
1992E	51720	1992	Youth Center (1992)	E
1995E	51735	1995	Housing Office (1995)	E
1996E	35006689	1996	Shopette (1996)	E

TABLE 5
Existing Secondary Meters
Electric Distribution System Little Rock AFB

Acct	Meter	Building	Street	Code3
1997E	47135825	1997	ATM (1997)	E
2000E	51765	2000	Housing Maintenance	E
2905E	51780	2905	School Gate	E
2998E	51785	2998	Water Pump House (2998)	E
3003E	51790	3003	Golf Course Pump house	E
75057E	51810	75057	Family Camp (75057)	E
CFeederE	51825	9999CE	C Feeder kWh	E
DFeederE	51835	9999DE	D Feeder kWh	E
POL 21	51840	9999	POL # 21	E

Table Notes:
D = 15 minute demand meter
E = electric meter

J1.5.2 Required New Secondary Meters

The Contractor shall install and calibrate new secondary meters as listed in **Table 6**. All secondary meters installed by the Contractor shall be pulse-initiating meters capable of being read remotely by the Base and compatible with the Base EMCS. The meters shall also have the multiplier permanently affixed to the face of the meter. New secondary meters shall be installed IAW Paragraph C.13, Transition Plan. After installation, the Contractor shall maintain and read these meters IAW Paragraphs C.3 and J1.6 below.

TABLE 6
New Secondary Meters
Electric Distribution System Little Rock AFB

Meter Location	Meter Description
Air National Guard (116)	
Spec. Ops (160)	
Communication Facility (397)	
107 Gate (399)	
Family Camp (590)	
Building 656	
Photo Lab (830)	
TCAC (868)	
Library (976)	

TABLE 6
New Secondary Meters
Electric Distribution System Little Rock AFB

Meter Location	Meter Description
Warehouse (986)	
Communication Building (988)	
Medical Facility (1092)	New meter shall be a demand meter, installed on the primary side of the transformer
Gym (1220)	
Contractor Staging Area (6th street near the entrance to the Commissary)	
Wastewater Lift Station 118	
Wastewater Lift Station 122	
Wastewater Lift Station 126A	
Wastewater Lift Station 162	
Wastewater Lift Station 249	
Wastewater Lift Station 258	
Wastewater Lift Station 392	
Wastewater Lift Station 590	
Wastewater Lift Station 1342	
Wastewater Lift Station 1585	
Wastewater Lift Station 1994	
Wastewater Lift Station 3001	
Wastewater Lift Station 30266	

J1.6 Monthly Submittals

The Contractor shall provide the Government monthly submittals for the following:

1. Invoice (IAW G.2). The Contractor's monthly invoice shall be presented in a format proposed by the Contractor and accepted by the Contracting Officer. Invoices shall be submitted by the 25th of each month for the previous month. Invoices shall be submitted to:

   Name: 314 CES/CEOE Energy Manager
   Address: 536 Thomas Avenue, Suite 130, Little Rock AFB, AR, 72099-4987
   Phone number: (501) 987-3533

2. Outage Report. The Contractor's monthly outage report will be prepared in the format proposed by the Contractor and accepted by the Contracting Officer. Outage reports shall be submitted by the 25th of each month for the previous month. Outage reports shall be submitted to:

   Name: 314 CES/CEOE Energy Manager
   Address: 536 Thomas Avenue, Suite 130, Little Rock AFB, AR, 72099-4987
   Phone number: (501) 987-3533

3. System Efficiency Report. If required by Paragraph C.3, the Contractor shall submit a system efficiency report in a format proposed by the Contractor and accepted by the Contracting Officer. System efficiency reports shall be submitted by the 25th of each month for the previous month. System efficiency reports shall be submitted to:

   Name: 314 CES/CEOE Energy Manager
   Address: 536 Thomas Avenue, Suite 130, Little Rock AFB, AR, 72099-4987
   Phone number: (501) 987-3533

J1.7 Energy Saving Projects

IAW Paragraph C.3, Requirement, the following projects have been implemented on the distribution system by the Government for energy conservation purposes.

Little Rock AFB has installed capacitors on the electric distribution system and replaced older infrastructure as a part of its program to achieve its goal of a 99 percent power factor. In FY2002, the Base maintained a power factor ranging between 98.0 and 100 percent. IAW paragraph J1.3, the Contractor shall operate and maintain the electric distribution in a manner that enables the Base to meet or exceed its goal of a 99 percent power factor.

J1.8 Service Area

IAW Paragraph C.4, Service Area, the service area is defined as all areas within the Little Rock AFB boundaries.

J1.9 Off-Installation Sites

No off-installation sites are included in the sale of the Little Rock AFB electric distribution system.

J1.10 Specific Transition Requirements

IAW Paragraph C.13, Transition Plan, **Table 7** provides a listing of service connections and disconnections required upon transfer.

TABLE 7
Service Connections and Disconnections
Electric Distribution System Little Rock AFB

Location	Description
None	There are no service connections or disconnections required for the system to be privatized

J1.11 Government Recognized System Deficiencies

Table 8 provides a listing of system improvements that the Government has planned. The Government recognizes these improvement projects as representing current deficiencies associated with the Little Rock AFB electric distribution system. If the system is sold, the Government will not accomplish these planned improvements. The Contractor shall make a determination as to its actual need to accomplish and the timing of any and all such planned improvements. Capital upgrade projects shall be proposed through the Capital Upgrades and Renewal and Replacement Plan process and will be recovered through Schedule L-3. Renewal and Replacement projects will be recovered through Sub-CLIN AB.

TABLE 8
System Deficiencies
Electric Distribution System Little Rock AFB

Project Location	Project Description
None	There are no Government-recognized system deficiencies